

PATENT SPECIFICATION

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COMPLETE SPECIFICATION

Improvements in or relating to Sliding Clasp Fastening Devices

We, STANDARD TELEPHONES AND CABLES LIMITED, a British Company, LOUIS WILLIAM REINKEN, a Citizen of the United States of America, and PERCIVAL FRANK HART, a British Subject, all of Connaught House, 63, Aldwych, London, W.C.2, England, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to sliding clasp fasteners commonly known as "Zip" fasteners of the kind in which two meeting edges of material are secured together by moving a slider longitudinally between the edges in one direction and are undone by moving the slider in the opposite direction.

Generally speaking, sliding clasp fasteners as previously proposed comprise a series of individual usually metallic elements projecting from each edge and arranged to inter-engage between one another. Such fasteners have not proved entirely satisfactory in that they are not moisture or dust-proof and further the maintenance and positioning of the individual elements is somewhat complicated. It has also been proposed to provide a sliding clasp fastener in which a continuous elongated rib or bead and a continuous socket member are adapted to be brought together and engaged by a slider, slidably engaging one or both of the parts of the fastener and adapted to urge the rib or bead part into and out of engagement with the socket part during movement of the slider longitudinally of the parts.

According to the present invention there is provided a sliding clasp fastener for securing together and undoing the meeting edges of material comprising a continuous projecting bead extending along one edge, a continuous resilient grooved member of complementary shape extending along the other edge and a slider movable longitudinally between the edges in one direction to do up the fastener by engaging the bead with the groove and in the other direction to undo the fastener by disengaging the bead from the groove, wherein the slider is provided with a solid

bulbous shaped separating member which, during movement of the slider in the direction for doing-up the fastener, operates to open out the groove to permit the slider to direct the bead into engagement therewith and, during movement of the slider in the direction for undoing the fastener, operates to open out the groove and also pushes the bead out of engagement therewith. The bead may be of dove-tail, spade or part circular formation in section. Alternatively, the bead may be provided with twin-projections to engage with a complementary shaped groove.

In order that the invention may be clearly understood and readily carried into effect reference is directed to the accompanying drawings included by way of example, in which:

Fig. 1 is a plan view of a sliding clasp fastener embodying the invention,

Fig. 2 is a section on the line A—A of Fig. 1,

Fig. 3 is a section on the line B—B of Fig. 1, and

Figs. 4, 5 and 6 are detail views.

Referring to the drawings, it will be observed that two meeting edges 1 and 2 of material have flexible flaps, 3 and 4, for example of cloth, canvas or the like secured thereto. The flaps 3 and 4 are moulded into continuous interengageable members comprising a projecting bead 5 and a grooved member 6, the arrangement being such that when the fastener is secured the bead is engaged continuously within the groove and when the fastener is undone the bead is disposed outside the groove.

In order to effect securing and undoing of the fastener, a shaped slider 7 is provided, adapted to be slid in one direction between the edges to secure the fastener and in the other direction to undo the fastener. The slider is shaped as shown in Fig. 1 from which it will be seen that when moved downwardly a solid bulbous shaped separating member 8 (see also Fig. 3) splays apart the flanges of the grooved member 6 and pushes the bead 5 out of engagement therewith and when the slider is moved upwardly the separating member 8 splays open the groove while the shape of the slider 7 is such as to direct

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the bead 5 into the groove the walls of which close therearound and retain the fastener in closed position.

It will be understood that the bead may be of various shapes (see Figs. 2, 4, 5 and 6) and the groove in each case is of complementary shape. Preferably the members 5 and 6 are continuously extruded from a flexible resilient thermoplastic material such as rubber or the like and then cut to lengths but if desired the bead may be of somewhat harder material than the grooved member which must be sufficiently flexible to enable the wedge to splay the walls thereof apart as described.

A sliding fastener embodying the invention is substantially watertight, is easy to manufacture and easy to operate and may be employed in connection with a variety of different materials having many different applications in connection with which the use of the known form of "Zip" fasteners has been suggested. It is believed that sliding fasteners in accordance with the invention will also be found to be extremely useful in large sizes in connection with covers for guns, covers for railway trucks, machinery and so on.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:

1. A sliding clasp fastener for securing together and undoing the meeting edges of material comprising a continuous projecting bead extending along one edge, a continuous resilient grooved member of complementary shape extending along the other edge, and a slider movable longitudinally between the edges in one direction to do-up the fastener by engaging the bead with the groove and in the other

direction to undo the fastener by disengaging the bead from the groove, characterised in this that the slider is provided with a solid bulbous shaped separating member which during movement of the slider in the direction for doing-up the fastener operates to open out the groove to permit the slider to direct the bead into engagement therewith and during movement of the slider in the direction for undoing the fastener operates to open out the groove and also pushes the bead out of engagement therewith.

2. A sliding clasp fastener according to claim 1, characterised in this, that the bead is of dovetail formation in section to engage within a complementary shaped groove.

3. A sliding clasp fastener according to claim 1, characterised in this, that the bead is of spade or part circular shape in section to engage with a complementary shaped groove.

4. A sliding clasp fastener according to claim 1 characterised in this, that the bead is provided with twin projections to engage with a complementary shaped groove.

5. A sliding clasp fastener according to any of the preceding claims characterised in this, that the bead portion and the grooved member are continuously extruded and cut to the required lengths.

6. A sliding clasp fastener substantially as hereinbefore described in connection with the accompanying drawings.

Dated this 20th day of December, A.D. 1938.

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[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 1.

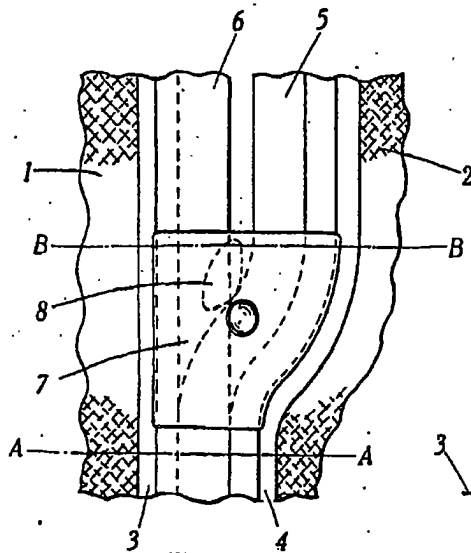


Fig. 2.

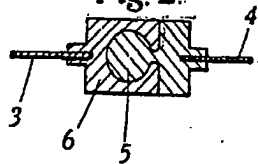


Fig. 3.

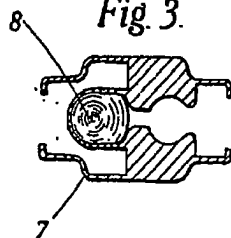


Fig. 4.

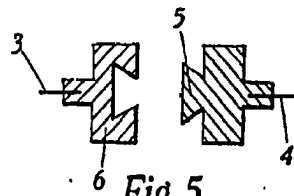


Fig. 5.

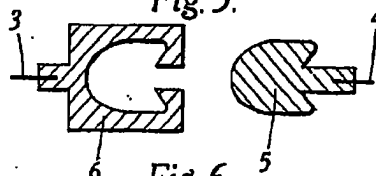


Fig. 6.

